

organic group. The Examiner further asserts that Adams et al. shows the organic group attached to the carbon and that the organic group can be at least one aromatic group or one C₁-C₁₂ alkyl group. The Examiner also asserts that Adams et al. shows the formation of a non-aqueous or aqueous emulsion inkjet ink that contains a suitable vehicle, binders, and additives. The Examiner further asserts that Adams et al. discloses a carbon black with a polymeric cationic amphiphile, such as methyl acrylate, methyl methacrylate, butyl acrylate, and styrene. In view of this, the Examiner concludes that the claimed compounds are identical to the compounds disclosed in Adams et al. For the following reasons, this rejection is respectfully traversed.

As recited in claim 1, the claimed invention relates to a modified pigment product. The modified pigment product comprises a pigment which has attached at least one steric group. Also attached to the pigment is at least one organic ionic group with at least one amphiphilic counter ion. The amphiphilic counter ion has a charge opposite to that of the organic ionic group. As discussed in significant detail at pages 5 and 6 of the present application, it is important for the Examiner to appreciate that there are two different types of groups attached onto the pigment. First, there is a steric group which is attached onto the pigment. Second, at least one organic ionic group along with at least one amphiphilic counter ion is attached to the pigment. As indicated at page 5, for instance of the present application, the combination of the two groups on the pigment provide beneficial properties with respect to the ability of the pigment product to disperse in a variety of materials, including aqueous and non-aqueous media as well as polymers, elastomers, coatings, inks, toners, and the like.

Unlike the claimed invention, Adams et al. discloses only at least one organic group with an amphiphilic ion attached to a carbon product. The attached organic group in Adams et al. has a charge opposite to the amphiphilic ion. Adams et al. does not teach or suggest the presence of at

least one steric group also attached to the carbon product. As mentioned above with respect to the claimed invention, the claimed invention has two different types of groups both directly attached to the pigment. Adams et al. teaches the attachment of only one type of group, namely at least one organic group with an amphiphilic ion that has a charge opposite to the organic group. There is no mention of a steric group which is also attached to the carbon black.

While Adams et al. discloses the use of polymeric groups, these polymeric groups do not relate to steric groups, but instead, are used as suitable amphiphilic ions. Adams et al. therefore fails to teach the attachment of any type of polymeric group directly onto a carbon product for purposes of acting or functioning as a steric group. Thus, Adams et al. clearly does not describe nor teach all the elements of the claimed invention.

Claims 2-4, 6-7, and 20-28 depend directly or indirectly on claim 1. As such, the reasons set forth above with respect to the patentability of claim 1 would also apply to these claims as well. Accordingly, for these reasons, this rejection should be withdrawn.

At page 4 of the Office Action, the Examiner rejects claims 29-31 under 35 U.S.C. §103 as being unpatentable over Adams et al. (U.S. Patent No. 5,698,016) in view of Kato et al. (U.S. Patent No. 5,731,115). The Examiner asserts that Adams et al. discloses a carbon black with a polymeric cationic amphiphile. The Examiner then asserts that Adams et al. differs from the present invention in that a print plate containing a substrate, a protective layer, an absorptive layer containing at least one modified pigment, and a method of imaging a lithographic print plate using a laser are not disclosed, along with subjecting the plate to a solvent for the removal of portions of the imaged layer. To overcome this deficiency, the Examiner asserts that Kato et al. discloses a preparation of a waterless lithographic printing plate by using a laser beam. The Examiner further asserts that Kato et al. discloses a photoconductive layer, which includes a

substrate with a pre-coated layer and a charge generating agent including organic pigments, such as a carbon black. Furthermore, the Examiner asserts that in the wet process of Kato et al., the non-tacky resin layer is treated with a solvent to remove portions from the imaged layer.

In view of this, the Examiner concludes that if a person having an ordinary skill in the art had desired to improve the properties of the printing plate, such as an increased durability of the printing plate, it would have been obvious for the one skilled in the art to use Adams et al.'s modified carbon black with a polymeric cationic amphiphile in Kato et al.'s preparation of the waterless lithographic printing plate as an alternative to the ordinary carbon black, with an expectation of a similar success as in the process of Kato et al. For the following reasons, this rejection is respectfully traversed.

Claims 29 through 31 relate to printing plates or methods of imaging a lithographic printing plate. Each of these claims is directly or indirectly dependent on claim 1 in that the radiation absorptive layer is using the modified pigment of claim 1 of the present application. As mentioned above, Adams et al. does not teach or suggest the modified pigment of claim 1 and the claims dependent thereon. As discussed above, Adams et al. does not teach or suggest the attachment of both a steric group and an organic ionic group with an amphiphilic counter ion onto the pigment. Kato et al. does not overcome these deficiencies. Thus, even if Adams et al. and Kato et al. were combined, the combination still would not teach or suggest the claimed invention since claims 29-31 are using the pigment of claim 1.

Further, Kato et al. relates to waterless lithographic printing plate and does not teach or suggest the use of a modified pigment and certainly not a pigment having attached at least one steric group and also an organic ionic group. Accordingly, for these reasons, this rejection should be withdrawn.

Allowable Claims

At page 5 of the Office Action, the Examiner objects to claims 5 and 8-19 as being dependent upon on a rejected base claim. The Examiner asserts that claims 5 and 8-19 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The undersigned and the applicants appreciate the Examiner's indication of the patentability of these claims. In view of the above comments, the remaining claims should also be allowable as well.

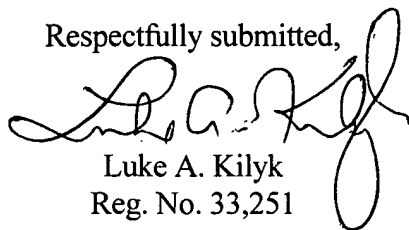
If there are any remaining questions, the Examiner is encouraged to contact the undersigned by telephone.

CONCLUSION

In view of the foregoing remarks, Applicant respectfully requested the reconsideration of this application and the timely allowance of the pending claims.

If there are any other fees due in connection with the filing of this response, please charge the fees to deposit Account No. 03-0060. If a fee is required for an extension of time under 37 C.F.R. §1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,



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